

SECTION 00490

ADDENDUM NO. 2

This Addendum modifies, amends, and supplements designated parts of the Bidding Documents and are hereby made a part thereof by reference. It shall be the responsibility of each Bidder to be familiar with the contents of this addendum and to notify, if necessary any Subcontractors and Suppliers they propose to use for various parts of the services of any changes or modifications contained in this Addendum. No claims for compensation, due to lack of knowledge of the contents hereof, will be considered. Bidders must acknowledge receipt of this Addendum in the Bid Form and comply with the requirements for submission of Bids as set forth in the Bidding Documents.

GENERAL: Per the replacement page included herein, the deadline to submit bids is **May 15th, 2014 at 10:00 AM** prevailing local time.

NOTICE is hereby given that the Bidding Documents have been modified and replacement pages are issued herewith.

Replacement pages have an Issue Date of **May 6, 2014**, contain reference to "ADDENDUM NO. 2" in the footer, and text changes identified by double-underline for additions and ~~Strikeout~~ for deletions.

| Replacement pages (with text changes) | Provided for purposes of double-sided printing only - no changes (front or back of replacement page) |
|--|---|
| 00120-1 | 00120-2 |
| 00210-1 | 00210-2 |
| 01003-3 | 01003-4 |
| 01003-5 | Blank page |
| 02501-1 and 2 | |
| 02501-4 | 02501-3 |
| 02501-5 and 6 | |

This Addendum is provided to Bidders in a single Portable Document Format (.PDF) posted on the City's website and will be available for examination at the Issuing Office. It is each Bidder's responsibility to check the website for Addenda per the Instructions to Bidders.

Bidders must comply with the requirements for submission of Bids in the Instructions to Bidders and the Bidding Documents remain unchanged except as indicated above.

Prepared and Issued by Woodard & Curran (Engineer) on behalf of:
City of Marlborough, MA (Owner)
Department of Public Works

END OF SECTION

SECTION 00120

INVITATION TO BID

The City of Marlborough (Owner) invites Bidders to submit sealed Bids for the Installation of Commercial Water Meters and MTUs Project 225414-Contract No. 2014-16 which includes, but is not limited to the purchase, delivery and installation of 550 water meters ranging in size from 1.5-inch to 6-inch. The Work also includes installation of Owner furnished Meter Transmission Units (MTUs) on all meters to be installed; and all materials and equipment, services and construction inherent to the Work.

Work associated with the water meter and MTU installation shall be substantially complete within 180 calendar days from the commencement of Contract Time and completed and ready for final payment 210 calendar days from the commencement of Contract Time.

The Project being bid is subject to Massachusetts General Laws, Chapter 30, Section 39M. A pre bid conference will not be held.

Sealed Bids will be received until 10:00 a.m. Thursday, May 15, 2014 at the Office of Assistant Commissioner, Utilities, Attention: Michele Mochnoc Higgins, Department of Public Works, Administration Offices-2nd Floor, 135 Neil Street, Marlborough, MA 01752. Bids will then and there be publicly opened and read aloud. Bids received after the time of announced opening will not be accepted.

Sets of Bidding Documents may be examined at the Issuing Office on or after April 16, 2014 after 10:00 a.m.

Issuing Office:

City of Marlborough Department of Public Works
Administration Offices-2nd Floor
135 Neil Street
Marlborough, MA 01752

Sets of Bidding Documents will be available as of April 16, 2014 and may be obtained **electronically at no cost** by registering on the Owner's website at:

www.marlborough-ma.gov (click Public Works then click DPW Procurement)

Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents or for modifications to the Bidding Documents including electronic conversion.

Bid security in the amount of five percent (5%) of the maximum Bid amount including all alternates must accompany the Bid in accordance with the Instructions to Bidders.

Minimum wage rates as determined by the Commissioner of Department of Workforce Development under the provisions of Massachusetts General Laws, Chapter 149, Sections 26 to 27D inclusive, as amended, apply to this Project. It is the responsibility of the Bidders, before Bid opening, to request if necessary, any additional information on Minimum Wage Rates for those trades people who may be employed for the proposed Work under the resulting Contract.

Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner further reserves the right to reject the Bid of any Bidder whom it finds, after reasonable inquiry and evaluation, to not be eligible or responsible. Owner may also reject the Bid of any Bidder if Owner believes that it would not be in the best interest of the Project or the public to make an award to that Bidder. Owner also reserves the right to waive all informalities not involving price, time, or changes in the Work and to negotiate contract terms with the Successful Bidder.

All qualified Bidders will receive consideration without regard to race, color, creed, religion, disability, sex or national origin. Minority and Women-owned businesses as certified by the Commonwealth's State Diversity Office ("SDO") are encouraged to apply.

END OF SECTION

SECTION 00210

SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

The following supplement shall modify the Instructions to Bidders pursuant to Article 27 therein. This section does not represent or reflect all applicable Laws and Regulations and may only include excerpts, portions, and para-phrasing of certain Laws and Regulations. Bidders are solely responsible to determine, obtain, review and interpret the full text of applicable Laws and Regulations.

1.01 Supplements and Modifications to the Instructions to Bidders

Add the following to Article 3 – Qualifications of Bidders.

- 3.03 The Owner may reject any Bid where Bidder's reference projects listed in Section 00451 have water meters with a demonstrated failure rate of 5 percent or greater during the first year of use. "Failure" shall be deemed to be any meter stoppage, failure to record, under-register, or over-register. In determining the failure rate of any meter, the Owner may consider its own experience with specific meters in lieu of any reference supplied by the Bidder, or both.

Add the following to Article 12 – Subcontractors, Suppliers and Others

12.05 Bidders must obtain pricing for proprietary meters directly from the manufacturer, Metron Farnier, by contacting Nisveta Karajkovic, Distribution Manager at (303) 449-8833 (phone), 303-449-1464 (fax) or nisvetak@metronfarnier.com.

1.02 Applicable Laws for Bid and Award; General

- A. This Contract is being bid under the provisions of Massachusetts General Law (MGL) Chapter 30, Section 39M, *Contracts for construction and materials; manner of awarding*.

1.03 Additional Defined Terms

- A. *Bid security* – Also "bid deposit" as used in MGL Chapter 30, Section 39M.
- B. *Lowest Responsible and Eligible Bidder* – the Successful Bidder, whose Bid is the lowest of those Bidders possessing the skill, ability and integrity necessary for the faithful performance of the Work; who shall certify its ability to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the Work; who shall certify that all employees to be employed at the Work Site will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins Work, and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee (if awarded a Contract); and who

obtains within 10 days of the Notice of Award, the bonds required by the Standard General and Supplementary Conditions and the Additional Supplementary Conditions (consistent with the security by bond required under MGL Chapter 149 Section 29), provided that for the purposes of this Section the term “security by bond” shall mean the bond of a surety company qualified to do business under the laws of the Commonwealth and satisfactory to the Owner and if there is more than 1 surety company, the surety companies shall be jointly and severally liable, in accordance with the provisions of Chapter 30, Section 39M.

1.04 Other Requirements of the MGL Applicable to the Project

- A. **Foreign Corporations:** The provisions of MGL Chapter 30, Section 39L, *Public construction work by foreign corporations; restrictions and reports*, apply to this Project. If a Bidder is a foreign corporation, it shall provide with its Bid, a certificate of the state secretary stating that the corporation has complied with requirements of Section 15.03 of subdivision A of Part 15 of MGL Chapter 156D and the date of compliance, and further has filed all annual reports required by Section 16.22 of subdivision B of Part 16 of said Chapter 156D, and further, will provide such certificate for each Subcontractor that is a foreign corporation if it receives a Notice of Award. See Section 00450 of the Bidding Requirements.
- B. **Taxes:** Bidder shall submit with its Bid, a Certificate of Good Standing with respect to all returns due and taxes from the Commonwealth of Massachusetts Department of Revenue certifying Bidder has complied with all laws relating to taxes, reporting of employees and contractors, and withholding and remitting of child support. Bidder will provide such certificate for each Subcontractor if it receives a Notice of Award. See explanation at the end of this Section.
- C. **Debarment:** Bidders shall not be debarred from bidding on or entering into a public contract in the Commonwealth of Massachusetts under the provisions of MGL Chapter 29, Section 29F, *Debarment from bidding; definitions; lists; notice; affiliates; mitigating circumstances*, or any other applicable debarment provisions of any other chapter of the MGL or any rule or regulations promulgated thereunder.
- D. **Financial Statements:** If Bidder receives a Notice of Award, the following shall be submitted prior to execution of the Agreement in accordance with MGL Chapter 30, Section 39R *Definitions; contract provisions; management and financial statements; enforcement*.
- A statement by management on internal accounting controls;
 - A statement prepared by an independent certified public accountant regarding management’s statement; and
 - An audited financial statement for the most recent completed fiscal year.

2.01 PRODUCT REQUIREMENTS

Add the following at the end of subparagraph A.1.

The definition of “material” also includes that defined in Section 00811, as required by Massachusetts General Law.

Add the following new Paragraph.

D. **Proprietary Equipment:** The Owner has determined that specifying this proprietary equipment for the Project is in the public’s best interest. The Owner would like to standardize on Metron Farnier Spectrum Commercial single jet commercial water meters due to their long term low flow accuracy and no maintenance requirements per Section 02501 and Owner’s determination included as an attachment to this Section.

3.01 TEMPORARY CONSTRUCTION FACILITIES

Pursuant to Paragraph F, Traffic Regulation,

subparagraph 4, regarding use of police officers, coordinate schedule of police details which will be direct billed to the Owner. See Section 01225.

Add the following to subparagraph F.1, Parking.

Off-Site construction parking area to be established at a location determined by Contractor.

Add the following to subparagraph F.2, regarding the MUTCD.

Also comply with applicable portions of the “Massachusetts Amendments to the 2009 Manual on Uniform Traffic Control Devices and the Standard Municipal Traffic Code” published by the Massachusetts Department of Transportation Highway Division.

Delete Paragraph G, Field Offices, in its entirety. Field offices are not required for the Project.

Pursuant to Paragraph H, Staging Area, Owner is not providing a location for staging area. Determine and secure a location for staging area.

3.02 TEMPORARY UTILITIES

Whereas field offices are not required for the Project, delete requirements relating to utilities for field offices in Paragraphs A, B, C, and G.

3.03 TEMPORARY CONTROLS

The following paragraphs generally do not apply to this Project.

- A. regarding dust control
- B. Water Control and Dewatering
- C. Erosion and Sediment Control
- D. Noise Control
- E. Pollution Control

Pursuant to Paragraph F, Traffic Regulation,

Add the following to subparagraph 1, Site specific traffic control plan.

In addition to a Site specific traffic control plan, submit a schedule of road closures/detours and obtain a road closure and road blockage permit for every location where Work is being performed.

Add the following to subparagraph 2, regarding the MUTCD.

Also comply with applicable portions of the “Massachusetts Amendments to the 2009 Manual on Uniform Traffic Control Devices and the Standard Municipal Traffic Code” published by the Massachusetts Department of Transportation Highway Division.

Add the following to subparagraph 4, regarding use of police officers.

- a. Coordinate schedule of police details which will be direct billed to the Owner per Section 01225.

3.04 OVERALL EXECUTION REQUIREMENTS

Pursuant to Paragraph A, Coordination,

Add the following to subparagraph 3, regarding Work coordination.

- a. Comply with the required Work sequence and coordination specified in Section 01002 and reflect in the Project scheduling.

Pursuant to subparagraph 7, other coordination requirements include the following.

- Coordinate with Owner and Engineer prior to performing any Work that will impact City operations.
- Coordinate Work with the City of Marlborough, Department of Public Works that may interrupt or affect the Owner’s existing system.
- Coordinate Work such that Work on each street is completed with minimum disruption to residents and businesses.

Pursuant to Paragraph B, Existing Conditions,

Pursuant to subparagraph 1, Project specific conditions, see information regarding existing conditions identified in 03000.

Add the following to subparagraph 2, existence and location of underground and other utilities and construction.

- Contact DIGSAFE (www.digsafe.com) by dialing 811.

Pursuant to Paragraph C, Field Engineering, generally does not apply to this Project.

3.05 STARTUP, TESTING AND COMMISSIONING

Pursuant to Paragraph E, Starting and Commissioning/Performance Testing, see requirements in individual Specification sections.

Pursuant to Paragraph F, Demonstration and Training, see requirements in individual Specification sections.

ATTACHMENTS

A. Owner's Determination regarding Proprietary Equipment

END OF SECTION



City of Marlborough
PROCUREMENT OFFICE

140 MAIN STREET
MARLBOROUGH, MASSACHUSETTS 01752
TEL. (508) 460-3707 FACSIMILE (508) 460-3747 TDD (508) 460-3610
BSLEEPER@MARLBOROUGH-MA.GOV

BEVERLY J. SLEEPER
MCPPO
CHIEF PROCUREMENT OFFICER

MEMORANDUM FOR FILE – USE OF PROPRIETARY SPECS

TO: Procurement File for Commercial Water Meter Bid – Contract #2014-16
FROM: Beverly Sleeper, Chief Procurement Officer
DATE: May 5, 2014
RE: Justification for Proprietary Specification-Metron-Farnier Single Jet Water Meters

This memorandum summarizes the justification for using a proprietary specification under M.G.L.c.30, Section 39M(b) to procure Metron-Farnier single jet water meters.

As stated in M.G.L. c.30, Section 39M(b), municipalities may specify one manufacturer for an item in bidding documents if there exist "sound reasons in the public interest stated in writing in the public records."

Therefore, the Marlborough Department of Public Works, Water & Sewer Division, would like to standardize on Metron-Farnier single jet water meters for meter sizes 1.5-inch and larger and use a proprietary specification for bidding based on the following:

- Metron-Farnier single jet water meters are **fully compatible** with the City's existing Neptune R900 Automatic meter reading system.
- The Metron-Farnier single jet water meters have the **highest low flow accuracy** for large diameter water meters in the industry.
- Only **one manufacturer meets the AWWA standard** for single jet water meters (C712) and is available on the US market.
- The Metron-Farnier single jet water meters **do not require batteries or maintenance and maintain their high accuracy** over many years.

The following proprietary water meter will be specified in the Bid Documents:

- Metron-Farnier Spectrum Commercial Water Meters

The City has received written confirmation (a copy is attached to this Memorandum) from the manufacturer, Metron Farnier, that they will extend to meter installation companies that have qualified credit, direct pricing for the City's commercial single jet water meter purchase and installation project. The City will include in the bid specifications the proper contact as follows: Nisveta Karajkovic, Distribution Manager, Metron-Farnier, LLC; phone 303-449-8833; fax 303-449-1464; email nisvetak@metronfarnier.com.

The City has taken this action in the best interest of the public given that the original specification was designed to be open to all manufacturers and installers in accordance with MGL c.30, § 39M for competitive bidding. As of June 1, 2010, the American Water Works Association (AWWA) developed a national standard for single jet water meters. The subcommittee that developed the standard was comprised of a number of meter manufacturers including Metron-Farnier, Neptune, Badger, Hersey, AMCO, Sensus, Itron and Master Meter. Many of these meter manufacturers had single jet water meters available or were in the process of developing a single jet meter.

During the bidding process currently in process, the City has discovered that the manufacturers specified above have either stopped making single jet water meters, or have made them available solely on the European market, leaving only one manufacturer in the U.S. that sells single jet meters meeting the AWWA standard that the City has specified in its specifications.

In light of this recent finding, the City has made the determination, in the best interest of the public, that it wishes to pursue a different bidding strategy and file this justification to use a proprietary water meter specification in accordance with M.G.L. c. 30, §39M. The City believes that competitive bids will be received for the purchase of the Metron-Farnier single jet water meters and installation project.

A handwritten signature in black ink, reading "Beverly J. Sleeper". The signature is fluid and cursive, with the first name "Beverly" and last name "Sleeper" clearly legible. The middle initial "J." is smaller and less distinct.

Beverly J. Sleeper, MCPPO

Chief Procurement Officer

City of Marlborough

140 Main Street

Marlborough, MA 01752

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Fax: 508-460-3747

bsleeper@marlborough-ma.gov

SECTION 02501

COMMERCIAL WATER METERS AND METER TRANSMISSION UNITS

PART 1 – GENERAL

1.01 SUMMARY

- A. Remove existing water meters, remove existing registers from meters and store registers for a period of 12 months from the date of meter replacement. Leave existing meter with the Owner's customer ("Customer").
- B. Furnish and install ~~new~~ Metron Farnier Spectrum Commercial single jet water meters with electronic registers.
 - 1. The Owner has determined that specifying this proprietary equipment for the Project is in the public's best interest. The Owner would like to standardize on single jet commercial water meters due to their long term low flow accuracy and no maintenance requirements.
- C. Install Owner furnished Meter Transmission Units (MTUs) manufactured by Neptune Technology Group, Model R900 Meter Interface Unit.
- D. Provide two Neptune CE 5320B Field Service Tools (Neptune Handhelds) for testing MTUs.
- E. Geocode each meter/MTU installation location with a latitude and longitude provided on the required work order.
- F. Remove and dispose of existing appurtenances.

1.02 PRICE AND PAYMENT PROCEDURES

- A. Measurement and payment requirements: per Division 01 General Requirements.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Coordination, Sequencing, and Scheduling: per Division 01 General Requirements.

1.04 SUBMITTALS

- A. Submit in accordance with Division 01 General Requirements.
- B. Proposed Control and Management Plan, detailing planned procedure for the notification of Customers, procedure for scheduling of installations, installation procedures, database formats, protocol for handling non-standard installations, protocol for handling curb stops, protocol for handling repairs, and template of work order form for review prior to performing any of the notifications and installations.

- C. Shop Drawings: manufacturer's instructions, literature, illustrations, specifications, drawings, data and descriptive literature on all pieces of equipment.
- D. Performance specifications.
- E. Affidavit of compliance from manufacturers stating that the meters provided comply with the latest version of AWWA C712, as appropriate, the registers meet all requirements specified herein.
- F. Copy of the National Type Evaluation Program (NTEP) Certificate of Conformance (COC) from manufacturer certifying and listing the meter size and register type as legal for trade and the NTEP COC shall list the meter size and register type being supplied as approved for use in utility billing, commercial metering, and legal sub-metering applications.
- G. Copies of advertisements, door hangers, letters and flyers to be distributed during the contract for approval by the Owner. Once approved, submit final copies for Engineer and Owner's records.
- H. Copy of database fields and format for approval by the Owner.
- I. Meter, register, and MTU warranties.
- J. Closeout and Maintenance Material Submittals: per Division 01 General Requirements.
 - 1. Operation and Maintenance Data for each component including copies of Shop Drawings, reports, maintenance data and schedules, description of operation, and spare parts information with ordering numbers, nearest location where the spare parts may be obtained current price list for parts.

1.05 QUALITY ASSURANCE

- A. Provide in accordance with Division 01 General Requirements.
- B. Manufacturers not complying with the field or production experience must submit their meters for endurance testing evaluation.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Take delivery of associated water meters and appurtenances and provide adequate storage space to accommodate its staff, new water meters, meter hardware and any other parts or equipment necessary to conduct the Work. Return all un-used water meter equipment, MTUs, and appurtenances to the Owner.
- B. Transport adequate quantities of water meters, MTUs, and appurtenances from the storage areas to the Work Site.
- C. Store existing water meter registers in a locked, sheltered, heated, and secure location for later use in verifying final readings for a period of 12 months from the date the meter is replaced.

1.07 SITE CONDITIONS

- A. Existing Conditions: per Division 01 General Requirements.
- B. Prevent damage to the public and private property and restore damaged property at no additional cost to Owner.
- C. Photographs
 - 1. Take photographs of installation locations both before and after the installation. Label photographs, by file name, with the date and meter address of photograph (YYYYMMDD – METER ADDRESS). Photograph file names: date, street location, followed by street number, followed by a suite or apartment number if appropriate, followed by “B” for before and “A” for after. Uniquely identify each photograph.
 - 2. Pre-installation photographs: minimum of 2 digital photographs including a photograph of the existing meter, in place, prior to removal, and a photograph of the meter register that clearly displays the final meter reading. Post-installation photographs: minimum of 2 digital photographs including a photograph of the new meter, in place, and a photograph of the meter register that clearly displays the initial meter reading. Take photographs of any notable “Miscellaneous data” as described in Paragraph 3.16.A. Use a dry-erase board or other acceptable means of indicating the Customer account number, meter number, meter reading, date and “before” or “after” status and include in photographs.
 - 3. Minimum resolution: 6.0 megapixels and stored in JPEG format.
- D. Submit digital photographs of the installation location taken before and after the installation with the weekly reports to Engineer on CD.

1.08 WARRANTY

- A. Special Warranties/Extended Correction Period: in accordance with Section 00805 of the Additional Supplementary Conditions.

PART 2 – PRODUCTS

2.01 GENERAL

- A. Provide meters compatible with Owner’s existing R900 AMR System by Neptune Technology Group.
- B. New meter data: in a format suitable for upload to the Owner’s MUNIS billing system.
- C. Provide water meters complete with an electronic register that meet the American Water Works Association (AWWA) standards C712, C707, and NSF 61.

- D. Meter materials: in conformance with the 2014 Safe Water Drinking Act future requirement of no lead or less than 0.25 percent (0.25%) lead content.
- E. Provide Meters and registers that allow for and be compatible with future upgrades of the manufacturers' product.
- F. Provide Meters and registers fabricated by the same manufacturer.
- G. Performance
 - 1. Provide meters conforming minimally to current AWWA C-712 test flows, headloss and accuracy standards. Provide a factory test tag certifying the accuracy at the flows required by AWWA C712 to ensure accuracy.
 - 2. Provide meters that operate up to a working pressure of 230 pounds per square inch (psi), without leakage or damage to any parts and with accuracy not be affected by variation in pressure up to 230 psi.
 - 3. Meet the flow ranges indicated in Table 1.

**2.02 WATER METERS –COLD WATER SINGLE JET WATER METERS
(1-1/2 - INCH TO 6-INCH)**

- A. Provide Spectrum Commercial single jet water meters as manufactured by Metron Farnier.~~General~~
 - ~~1. Meters, 1 1/2 inch to 6 inch: meet or exceed the performance required by the "Cold Water Meters Single Jet Type" AWWA C712, or as otherwise specified. Meters shall conform minimally to current AWWA C 712, for test flows, headloss and accuracy standards.~~
 - ~~2. Single Jet Commercial Type meters: ISO 4064 1 Class B approved high performance standard and AWWA C712 Standard Cold Water Meters Single Jet, as most recently revised.~~
 - ~~3. Meters: NSF 61 Certified for Low Lead (less than 0.25 percent).~~
 - ~~4. Cold water meters: produced from an ISO 9001 manufacturing facility and be certified to the National Conference on Weights and Measures (NCWM) regulatory standards.~~
 - ~~5. Furnish meters with spools, spacers, or other pipeline hardware to meet the laying length required for complete meter installation (replace existing 1.5 inch through 6 inch meters with single jet meters). Provide necessary spool pieces, flanges, couplings and/or accessories, to make up any difference in lay length between the new meter and the existing meter.~~
 - ~~6. Equip Single Jet meters with a test port spool piece.~~
 - ~~a. 1.5 inch and 2 inch meters: one inch test port.~~
 - ~~b. 3 inch meters and larger: two inch test port.~~

7. ~~Determine the size of the meter assembly based on the nominal size of the opening of the inlet and outlet flanges of the meter.~~
8. ~~Meet the performance specifications outlined in Table 1 and submit documentation as evidence of compliance.~~

Table 1—AWWA Meter Flow Rate Requirements

| METER SIZE | Low Flow Accuracy (95-101.5%) | Normal Flow Accuracy (98.5% TO 101.5%) |
|------------|-------------------------------------|--|
| 1.5 inch | 0.50 GPM | 1.50-100 GPM |
| 2 inch | 0.50 GPM | 2.00-160 GPM |
| 3 inch | 0.50 GPM | 2.50-320 GPM |
| 4 inch | 3/4 GPM | 3.00-500 GPM |
| 6 inch | 1.5 GPM | 4.00-1,000 GPM |

B. ~~Type—Commercial Cold Water Single Jet Meter~~

1. ~~The meter shall utilize only one (1) measuring element (impeller) to achieve the performance shown in Table 1. No meters using two (2) or more measuring elements, such as combination meter or compound meters shall be accepted. Meters shall operate accurately with no straight run of pipe before or after the meter. Meter operation shall be unaffected by sand or other particulate material in the line. The manufacturer must warranty meter operation and accuracy with no strainer installed.~~
2. ~~Lay Length and Connections: AWWA Standard C712 (latest revision)~~
3. ~~Meter Maincase~~
 - a. ~~Lead free and guaranteed free from manufacturing defects in workmanship and material for the life of the meter.~~
 - b. ~~The main case shall be made of a non-corrosive material and NSF 61 certified for low lead (less than 0.25%) and shall withstand a working pressure of 230 psi without seeping or distortion affecting the free operation of the measuring unit. The direction of flow, meter size, serial number and year manufactured must be permanently indicated on the case. The serial number shall be stamped between the inlet or outlet port of the maincase and the register. Maincase markings shall be cast raised and shall indicate size, model, direction of flow, and NSF 61 certification. Plastic maincases are not acceptable.~~

C. ~~Bolts: 300 series non-magnetic stainless steel~~

~~D.B.~~ Register

1. Equip meters with a factory-installed tamperproof, electronic register with embedded cellular modems and prepaid service plans, 3-wire AMR output and data logging capabilities, hermetically sealed and firmly attached to meter case.
2. Provide with eight digit display in cubic feet, with programmable AMR 3 wire output and datalogging capability higher than one cubic foot resolution.
3. Register battery: rated to last a minimum of 10 years.
4. Internal components: non-corrosive construction.
5. Provide registers readily adaptable to various radio frequency AMR products without the need for on-site register programming. Furnish with a test sweep hand and/or a leak indicator.
6. Provide manufacturer warranty that registers are compatible with the Owner's existing AMR System.

~~E.C.~~ Strainers: only required for meter addresses identified in the List of Meters included in Section 00300.

~~F.~~ ~~Change Gears: Do not use to calibrate the meter.~~

~~G.~~ ~~Pressure test meters to provide evidence of capability to meet working pressure of 230 psi, without leakage or damage to any component~~

PART 3 – EXECUTION

3.01 CUSTOMER NOTIFICATION AND APPOINTMENT SCHEDULING

- A. Perform installation at the convenience of the Customer. Make appointments in a courteous and professional manner during reasonable hours, via letter notices, door hangers, telephone calls, post cards, door-to-door solicitation or by additional letters. Supply a sufficient number of toll-free telephone lines to receive all incoming requests for appointments 24 hours a day, seven days a week that is suitable for handling calls for both field support and appointments. Provide appointment scheduling on a website.
- B. Update the spreadsheet of available information containing Customer name, owner address, meter address, account number, and meter size to gather any/all missing information required to schedule meter replacements. Verify the meter sizes during pre-inspections, and update the aforementioned spreadsheet as new information becomes available.
 1. To expedite the installation Project, the Owner will advertise the Project in the local paper of record and provide a Project overview on the Owner's website, publicizing the Project.